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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------|-----------------|----------------------|---------------------|------------------|
| 10/620,764 | 07/17/2003 | Kari Niemela | 60091.00204 | 9147 |
| 32294 7 | 7590 04/21/2006 | | EXAMINER | |
| | NDERS & DEMPSEY | NGUYEN, LEE | | |
| 14TH FLOOR 8000 TOWERS CRESCENT | | ART UNIT | PAPER NUMBER | |
| | RNER, VA 22182 | | 2618 | |

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | |
|---|---|--|-------------|
| | 10/620,764 NIEMELA, KARI | | |
| Office Action Summary | Examiner | Art Unit | |
| | LEE NGUYEN | 2618 | |
| The MAILING DATE of this communication a Period for Reply | appears on the cover sheet w | ith the correspondence addres | ss |
| A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period for reply within the set or extended period for reply will, by sta Any reply received by the Office later than three months after the material patent term adjustment. See 37 CFR 1.704(b). | DATE OF THIS COMMUNI 1.136(a). In no event, however, may a lod will apply and will expire SIX (6) MON tute, cause the application to become Al | CATION. reply be timely filed NTHS from the mailing date of this commu BANDONED (35 U.S.C. § 133). | |
| Status | | | |
| 1) Responsive to communication(s) filed on | | | |
| <u> </u> | ——· his action is non-final. | | |
| 3) Since this application is in condition for allow | | ters, prosecution as to the me | erits is |
| closed in accordance with the practice unde | • | | |
| Disposition of Claims | | | |
| 4)⊠ Claim(s) <u>1-24</u> is/are pending in the applicati | on | | |
| 4a) Of the above claim(s) is/are withd | | | |
| 5) Claim(s) 2,5,7,10,13,15,18,21 and 23 is/are | | | |
| 6) Claim(s) 1,3,4,8,9,11,12,16,17,19,20 and 24 | | | |
| 7)⊠ Claim(s) <u>6,14 and 22</u> is/are objected to. | <u>.</u> .o. a. o . ojootoa. | | |
| 8) Claim(s) are subject to restriction and | d/or election requirement. | | |
| Application Papers | | | |
| 9) The specification is objected to by the Exam | iner | | |
| 10) The drawing(s) filed on is/are: a) a | | by the Examiner | |
| Applicant may not request that any objection to t | • • • • | • | |
| Replacement drawing sheet(s) including the corr | - · · · | | 1.121(d). |
| 11) The oath or declaration is objected to by the | | · · · | |
| Priority under 35 U.S.C. § 119 | | | |
| 12) Acknowledgment is made of a claim for fore | ian priority under 35 H S C | \$ 119(a)_(d) or (f) | |
| a) All b) Some * c) None of: | ight phonty under 55 0.5.0. | 3 119(a)-(u) or (i). | |
| 1. Certified copies of the priority docume | ents have been received | | |
| 2. Certified copies of the priority docume | | Application No | |
| 3. Copies of the certified copies of the p | | | age |
| application from the International Bure | • | | 5 |
| * See the attached detailed Office action for a l | | received. | |
| | · | | |
| Attachment(s) | | | |
| 1) Notice of References Cited (PTO-892) | 4) \Box Interview | Summary (PTO-413) | |
| 2) D Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No | s)/Mail Date | |
| Information Disclosure Statement(s) (PTO-1449 or PTO/SB/ Paper No(s)/Mail Date | 708) 5) Notice of 6) Other: | Informal Patent Application (PTO-15 | 2) |
| . apo. 110/0/111an Dato | <u> </u> | <u></u> | |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 9, 11, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chizhik et al. (US 2004/0203395).

Regarding claims 1, 9, 17, Chizhik teaches a method/means for compensating Doppler shift in a telecommunication system, where at least one user terminal 235 is moving in relation to a network element 230 (fig. 2), the method comprising: inherently measuring a received uplink signal (calculating or receiving signals that have a similar Doppler shift, see abstract); estimating an amount of Doppler frequency compensation for at least one downlink signal related to a user terminal based upon a measured received uplink signal (Doppler compensatable, abstract); and compensating a Doppler shift for at least one downlink signal related to the user terminal by shifting a frequency of the signal according to the estimated amount of Doppler frequency compensation (processing one or more of the Doppler-compensatable to compensate for the Doppler shift, see abstract and [0040]).

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Regarding claims 3, 11, 19, Chizhik also teaches that the estimation takes into account the previously made Doppler effect compensation (see already determined in [0085]).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 8, 12, 16, 20 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Chizhik et al. in view of Geier (US 5,525,998).

Regarding claims 4, 8, 12, 16, 20 and 24, Chizhik fails to teach that the estimation of Doppler frequency compensation utilizes information on system geometry, and that the estimated amount of the Doppler frequency compensation is filtered or weighted for increasing estimation accuracy. Geier teaches that Doppler frequency compensation utilizes information on system geometry, and that the estimated amount of the Doppler frequency compensation is filtered or weighted (col. 6, lines 24-35 and col. 7, lines 44-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Geier with Chizhik in order to satisfy the requirement of Doppler measurement since all Doppler error variances will not be equal.

Allowable Subject Matter

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Claims 6, 14, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 6, 14 and 22, the prior art of record fails to teach that the Doppler frequency compensation is performed for selected cells, if there are cells for user terminals located in a predetermined location.

Claims 2, 5, 7, 10, 13, 15, 18, 21 and 23 are allowed.

Regarding claims 2, 10 and 18, the prior art of record fails to teach informing a handover target cell of a required Doppler shift compensation while performing a handover; estimating an amount of Doppler frequency compensation for at least one user terminal related downlink signal of the handover target cell utilizing the information on the required Doppler shift compensation communicated from the source cell, and angles of velocity; and compensating a Doppler shift in the handover target cell for at least one downlink signal related to the user terminal by shifting a frequency of the signal according to the amount of Doppler frequency compensation estimated in the handover target cell.

Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to LEE NGUYEN whose telephone number is 571-272-

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7854. The examiner can normally be reached on FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDERSON D. MATTHEW can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).